

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A hinge apparatus of a drum for a clothing dryer having a case, comprising:

a front hinge portion formed between a front of the case and a front of the drum, and for rotatably supporting the front of the drum; and

a rear hinge portion installed between a rear of the case and a rear of the drum, and for supporting so that the rear of the drum swings in vertical and horizontal directions, comprising:

a housing fixed at the center of the rear drum;

a ball bearing inserted at the housing; and

a shaft extending entirely through the ball bearing; and

wherein the case has a convex portion with a recess for receiving a nut and a reinforcing member has a flat board shape and a convex portion with a recess for receiving the convex portion of the case ~~with a recess for receiving a nut~~ for reinforcing stiffness of the case when the shaft is engaged therewith and the reinforcing member is mounted at an outer surface of the case.

2. (Canceled)

3. (Previously Prevented) The apparatus of claim 1, wherein the housing includes a first housing and a second housing which are fixed at the rear of the case, and when the first housing and the second housing are assembled, a spherical groove in which the ball bearing is swingably inserted is formed.

4. (Previously Presented) The apparatus of claim 3, wherein the first housing comprises:

a first engaging portion having a bolt hole fixed at the rear surface of the drum and a bolt engaging hole bolt-engaged with the second housing, said bolt hole and the bolt engaging hole being formed in a circumferential direction; and

a first hinge portion integrally formed at the center of the first engaging portion, and having a hemispherical groove in which the ball bearing is inserted.

5. (Currently Amended) The apparatus of claim 3 4, wherein the second housing comprises:

a second engaging portion having a plurality of bolt holes which is bolt-engaged with the first engaging portion; and

a second hinge portion having a hemispherical groove in which the ball bearing is inserted, and a penetrating hole through which the shaft passes.

6. (Previously Presented) The apparatus of claim 1, wherein one end of the shaft is fixed at the ball bearing, and the other end of the shaft has a spiral formed portion so as to be bolt-engaged with the case while providing an empty gap between the second housing and the case.

7. (Original) The apparatus of claim 6, wherein a base nut which is screw-engaged with the shaft is provided at an inner surface of the case.

8. (Currently Amended) A hinge apparatus of a drum for a clothing dryer having a case, comprising:

a front hinge portion formed between a front of the case and a front of the drum, and for rotatably supporting the front of the drum; and

a rear hinge portion installed between a rear of the case and a rear of the drum, and for supporting so that the rear of the drum swings in vertical and horizontal directions, the rear hinge portion having a shaft connected with a ball bearing and fixed at the rear of the case, wherein one end of the shaft is fixed at the ball bearing, and the other end of the shaft has a spiral formed portion so as to be bolt-engaged with the case;

a base nut having a flat disc shape installed at a convex portion of the case with a recess for receiving the base nut; and

a plurality of engaging protrusions spaced from one another with a certain interval therebetween around the outer circumference of the base nut for engagement with a stopping pin through an insertion groove formed at the convex portion of the case with a recess for receiving the base nut; and

a reinforcing member,

wherein the stopping pin is integrally formed in the reinforcing member and is not detachable from the reinforcing member, is inserted in an insertion groove formed at the case, and is protruded to the nut installed portion, so that the stopping pin stops a stopping protrusion.

9-10. (Canceled)

11. (Previously Presented) The apparatus of claim 8, wherein the reinforcing member is fixed to the case by a weld or a rivet.

12. (Canceled)

13. (Currently Amended) A hinge apparatus of a drum for a clothing dryer having a case, comprising:

a housing fixed at a rear center portion of the drum;

a ball bearing inserted into the housing;

a shaft connected with the ball bearing and fixed at a rear portion of the case; and

a shaft fixing unit to fix the shaft position in assembly of the hinge apparatus, comprising:

a base nut member screw-engaged with the shaft, installed at an inner surface of the case and having a plurality of engaging protrusions spaced from one another with a certain interval therebetween around the outer circumference of the base nut member; and

a reinforcing member mounted at an outer surface of the case for reinforcing stiffness of the case when the shaft is engaged therewith and having a stopping pin integrally formed in the reinforcing member and not being detachable from the reinforcing member to engage with the engaging protrusions through an insertion groove formed at a convex portion of the case with a recess for receiving the base nut.

14. (Previously Presented) The apparatus of claim 13, wherein the base nut member

has a disc shape and is installed at a nut-installed portion formed at a center portion of the case.

15. (Previously Presented) The apparatus of claim 13, wherein the stopping pin is inserted into an insertion groove formed at the case, and is protruded to a nut installed portion so as to stop the engaging protrusions by the stopping pin.

16. (Canceled)

17. (Currently Amended) A hinge apparatus of a drum for a clothing dryer having a case, comprising:

a housing fixed at a rear center portion of the drum;

a ball bearing inserted into the housing;

a shaft connected with the ball bearing and fixed at a rear of the case; and

a shaft fixing unit to fix the shaft position in assembly of the hinge apparatus, comprising:

a base nut member screw-engaged with the shaft, installed at an inner surface of the case and having a plurality of engaging protrusions spaced from one another with a certain interval therebetween around the outer circumference of the base nut member; and

a stopping pin provided so as to engage with the engaging protrusions through an insertion groove formed at a convex portion of the case with a recess for receiving the base nut case,

wherein a reinforcing member is mounted at an outer surface of the case and the stopping

pin is integrally formed at the reinforcing member and is not detachable from the reinforcing member for reinforcing stiffness of the case when the shaft is engaged therewith.

18. (Canceled)

19. (Previously Presented) The apparatus of claim 17, wherein the base nut member has a disc shape and is installed at a nut-installed portion formed at a center portion of the case.

20. (Previously Presented) The apparatus of claim 17, wherein the stopping pin is inserted into an insertion groove formed at the case and is protruded to the nut installed portion so as to stop the engaging protrusions by the stopping pin.

21. (Previously Presented) The apparatus of claim 17, wherein the reinforcing member is fixed to the case by a weld or a rivet.

22. (Currently Amended) A method for assembling a hinge apparatus for a drum of a clothing dryer having a case, comprising:

providing a first housing having a first hinge portion at a center thereof;

providing a second housing having a second hinge portion at a center thereof so as to couple to the first housing;

providing a shaft at a center portion of a ball bearing;

fixing the first housing to a rear center portion of the drum;

inserting the ball bearing into the first hinge portion of the first housing and then coupling the second housing to the first housing, so that the ball bearing can be rotated in a space formed as the first housing and the second housing are coupled to each other;

coupling a shaft fixing member to a spiral-formed portion provided at the end of the shaft, and inserting the end of the shaft into the case so as to fix the shaft into the case;

stopping the shaft fixing member by inserting a stopping pin ~~located at~~ integrally formed in the reinforcing member and not being detachable from the reinforcing member into an insertion groove formed at the case between engaging protrusions located at the shaft fixing member; and

coupling a nut to the end portion of the shaft, whereby rotation of the shaft in assembling the hinge apparatus is prevented by the shaft fixing member.

23. (Previously Presented) The method of claim 22, wherein in the step of providing the first housing, a semi-sphere groove is formed in the first hinge portion.

24. (Previously Presented) The method of claim 22, wherein in the step of providing the second housing, a semi-sphere groove is formed in the second hinge portion.

25. (Original) The method of claim 22, wherein in the step of preventing rotation of

the shaft fixing member, a reinforcing member is coupled to the end portion of the shaft from an outer side of the case.

26. (Canceled)

27. (Previously Presented) The method of claim 22, wherein the stopping pin located at the reinforcing member is curvedly extending from an outer circumferential surface of the reinforcing member.

28. (Previously Presented) The method of claim 25, wherein the shaft fixing member is contacted with an inner surface of the case and the reinforcing member is contacted with an outer surface of the case.

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Amendments to the Drawings

The attached sheet of drawings includes changes to Fig. 5. This sheet, which includes Fig. 5, replaces the original sheet including that same Figure.

DESCRIBE CHANGE: One instance of numeral 84 and an associated lead line have been deleted so that numeral 84 only refers to one element in the figure, which is consistent with the specification.

Attachment: Replacement Sheet